

Please type a plus sign (+) inside this box → +

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.



Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 2

Complete If Known

Application Number	10/621,504
Filing Date	17 July 2003
First Named Inventor	Martin MALLINSON
Group Art Unit	2644
Examiner Name	Andrew C. FLANDERS

Attorney Docket Number HBES 1000-1

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document Number	Kind Code ² (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
AeF	A1	2004/0165661		Braun	08-26-2004	
	A2	6795004		Masuda et al.	09-21-2004	
	A3	5559467		Smedley	09-24-1996	
	A4	5974089		Tripathi et al.	10-26-1999	
	A5	6344811		Melanson	04-05-2002	
	A6	6466087		Ruha	10-15-2002	
AeF	A7	6794930		Nurminen	09-21-2004	
	A8					
	A9					
	A10					
	A11					
	A12					
	A13					
	A14					
	A15					
	A16					
	A17					
	A18					
	A19					
	A20					

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Offices	Number ⁴	Kind Code ⁵ (if known)				
	B1							
	B2							
	B3							
	B4							
	B5							
	B6							
	B7							
	B8							
	B9							
	B10							

Examiner Signature

Date Considered C/17/05

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box →

PTO/SB/08B (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

2

of

2

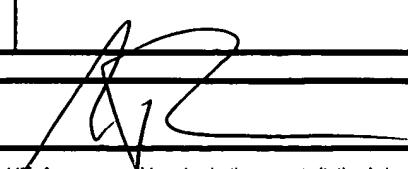
Complete if Known

Application Number	10/621,504
Filing Date	17 July 2003
First Named Inventor	Martin MALLINSON
Group Art Unit	2644
Examiner Name	Andrew C. FLANDERS
Attorney Docket Number	HBES 1000-1

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
ACF	C1	JORGE VARONA, "Power Digital-to-Analog Conversion Using Sigma-Delta and Pulse Width Modulations," ECE1371 Analog Electronics II, ECE University of Toronto, pp. 1-14, 2001.	
	C2	ERIK BRESCH and WAYNE T. PADGETT, "TMS320C67-Based Design of a Digital Audio Power Amplifier Introducing Novel Feedback Strategy," Rose-Hulman Institute of Technology, Electrical and Computer Engineering Department, pp. 1-16, 1999.	
	C3	K. P. SOZANSKI, R. STRZELECKI and Z. FEDYCZAK, "Digital Control Circuit for Class-D Audio Power Amplifier," Power Electronics Specialists Conference, PESC 2001 IEEE 32nd Annual, volume 2, pp. 1245-1250, 2001.	
	C4	MORTEN JOHANSEN and KARSTEN NIELSEN, "A Review and Comparison of Digital PWM Methods for Digital Pulse Modulation Amplifier (PMA) Systems," 107th Convention of Audio Engineering Society, September 24-27, 1999, New York, New York.	
	C5	THOMAS TAUL, KARSTEN NIELSEN and MICHAEL A.E. ANDERSEN, "Comparing Nonlinear with Linear Control Methods for Error Correction in Switching Audio Amplifier Output Stages," 104th Convention of Audio Engineering Society, May 16-19 1998, Amsterdam.	
	C6	KARSTEN NIELSEN, "MECC - A Novel Control Method for High End Switching Audio Power Amplification," 105th Convention of Audio Engineering Society, September 26-29, 1998, San Francisco, California.	
	C7	CRILLES BAK RASMUSSEN, "Hybrid Digital-Analog Feedback Audio Amplifiers," 2004 Dissertation, in cooperation with Bang & Olufsen ICEpower A/A, Lyngby 2004, Eksamensprojekt, NR. IMM-Thesis-2004-68. (NOT PRIOR ART)	
	C8	M. O. J. HAWKSFORD, "Time-Quantized Frequency Modulation, Time-Domain Dither, Dispersive Codes, and Parametrically Controlled Noise Shaping in SDM," J. Audio Eng. Soc., Vol. 52, No. 6, pp. 587-617, June 2004. (NOT PRIOR ART)	
✓	C9	D. WEILER, P.A. NIELSEN, D. HAMMERSCHMIDT, O. MACHUL and B. J. HOSTICKA, "Single Bit Sigma-Delta Modulator with Nonlinear Quantization for μ -Law Coding," 23rd European Solid-State Circuits Conference, Southampton, United Kingdom, 16-18 September 1997.	

Examiner Signature



Date Considered

6/18/05

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.